Participate in the Future of Java

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San Diego JUG





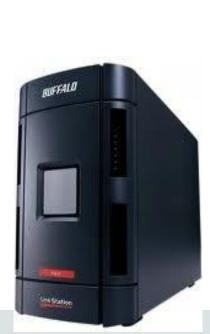




What Runs Java?



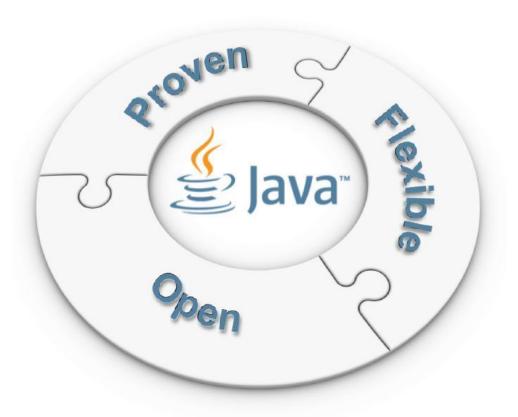








Ubiquitous



- 9 Million Java developers
- 3 Billion devices
- #1 Choice for developers
- #1 Development platform



Scalable & Secure

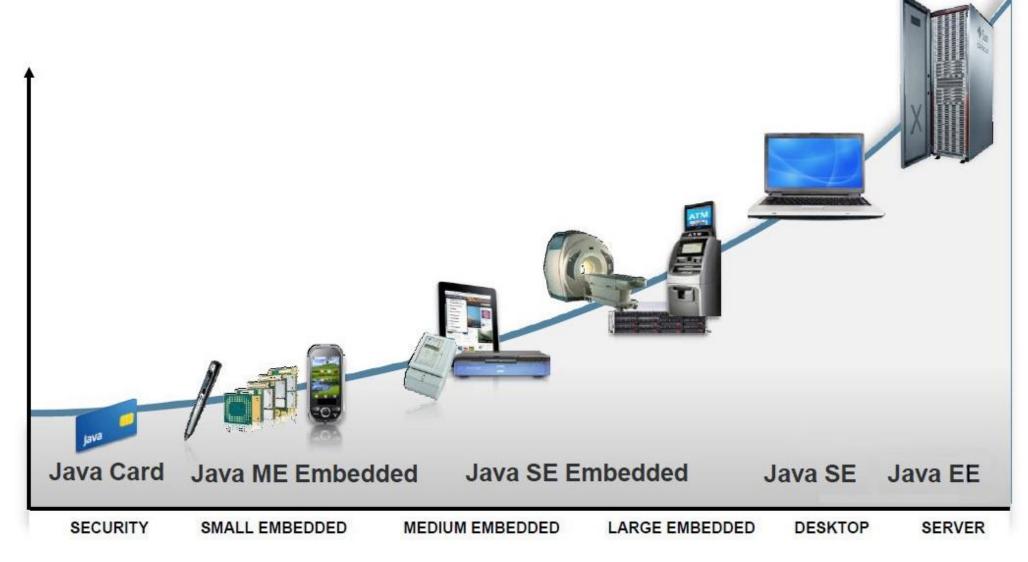
Footprint

100MB+

10MB-100MB

1MB-10MB

50KB-1MB





Compatible





Collaboratively Developed - Community





Heather VanCura Java Community Process (JCP) Program



- Director of the JCP Program Office
- ·Leader of Global Adopt-a-JSR Programs
- Open Source Fan
- Native Californian from San Diego
- Personal Interests: Fun ©

Bay Area, California - USA









Statistics

- 12,000+ Users
- 2,500 Expert Group Members
- 800+ Member Organizations
- 60+ Java User Groups
- 25 EC Members
- 375+ JSRs





Who Are The Members?

- Corporations
- Non-Profits/Open
 Source
- Java User Groups
- Individual Developers



https://jcp.org/en/participation/membership



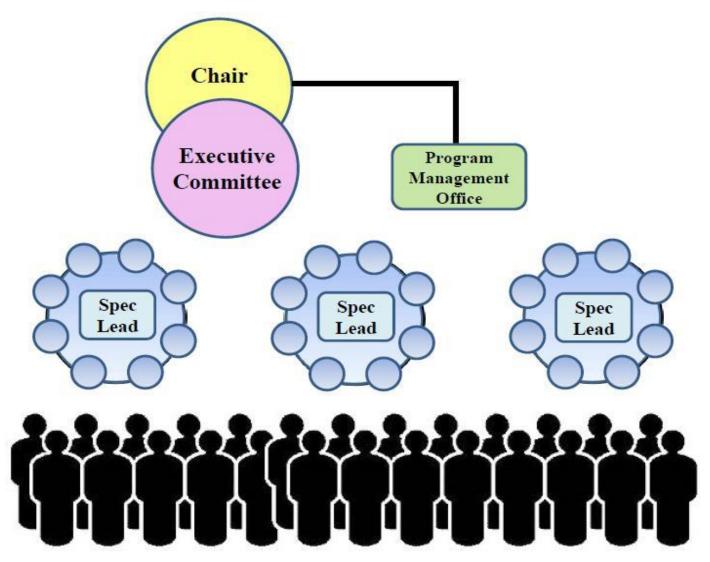
The Executive Committee

- Corporations
- Non-Profits/Open
 Source
- Java User Groups
- Individual Developers





Organization





Work of the JCP – How We Do It

- Java Specification Requests (JSRs)
 - A JSR is a single version of a Java specification.
- JSRs are led by a community member (the Spec Lead), with a group of interested members (the Expert Group) helping with the day-to-day decisions and work.
 - Any JCP member can submit and lead a JSR.
- Each Expert Group must deliver:
 - The Specification
 - A Reference Implementation (RI)
 - A Technology Compatibility Kit (TCK)



Compatibility Triangle

Specification

Is the specification

unambiguous?

Can you build an implementation?

Technology Compatibility Kit

Reference Implementation

Is the TCK correct? Does the RI conform?

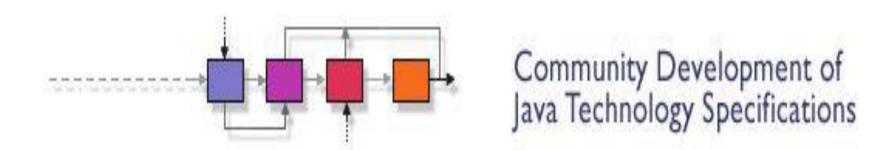


The JSR Development Cycle

Includes formal public reviews and votes by the Executive Committee.

Full Members can submit & lead JSRs, serve on JSR Expert Groups.

See the Process Document for the details.



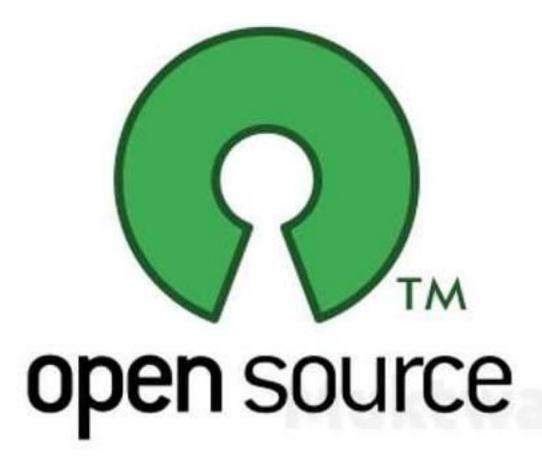


How else can you get involved?

- Share ideas and feedback, comment on list and public issue trackers.
- Read early versions of specifications and Javadocs.
- Try writing sample applications using early builds of reference implementation.
- Write or speak about the technology and encourage others to participate. Translate into your native language.
- •Evangelize the JSR -social media, blogging or lightning talks.
- •Help with documentation.



How: Open Standards & Open Source





Complimentary

- Open source important requirement. So are Standards.
 - Coop-etition. Agree on what to standardize (cooperation) & what to complete on (implementations).
- Open standards implemented in open source = easier to implement standard & for developers to understand technology.
 - Results in more implementations and greater adoption of the standard.
- An effective way to develop a standard-start with an open source project that has demonstrated the need for standardization.



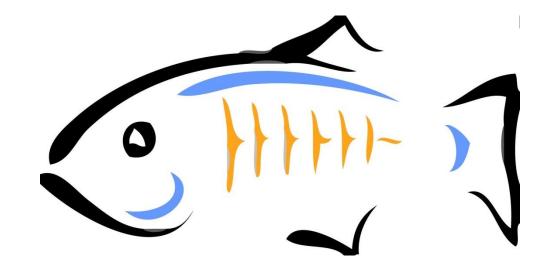
Open Source Implementations

The Reference Implementations of the Java SE and Java EE platforms are also developed collaboratively and released under open-source licenses.

–Java SE: OpenJDK

–Java EE: Project GlassFish







Why Participate?



- 1. Knowledge
- 2. Skills
- 3. Visibility
- 4. Altruism
- 5. Fun



Why Participate as Corporation?



Joining the JCP empowers you to:

- Take Initiative Requirements
- Adapt and Inform
- Develop New Markets
- Grow Developers



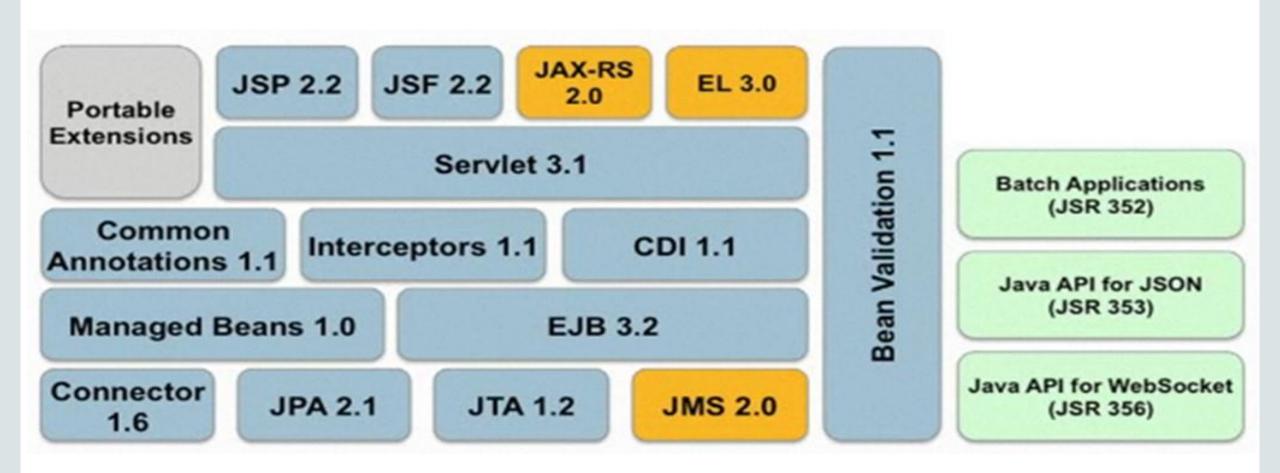
2011 - Present Day



- •New revisions of each of the three platforms.
- "JCP.Next" reforms .
- •Increased participation from Java User Groups.

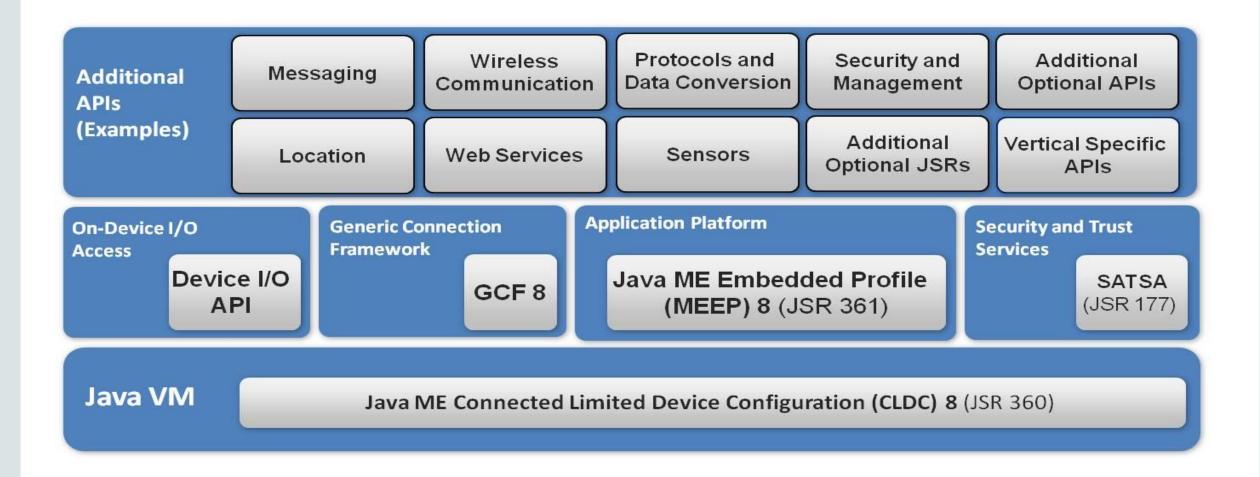


Java EE 7: (JSR 342) - May 2013



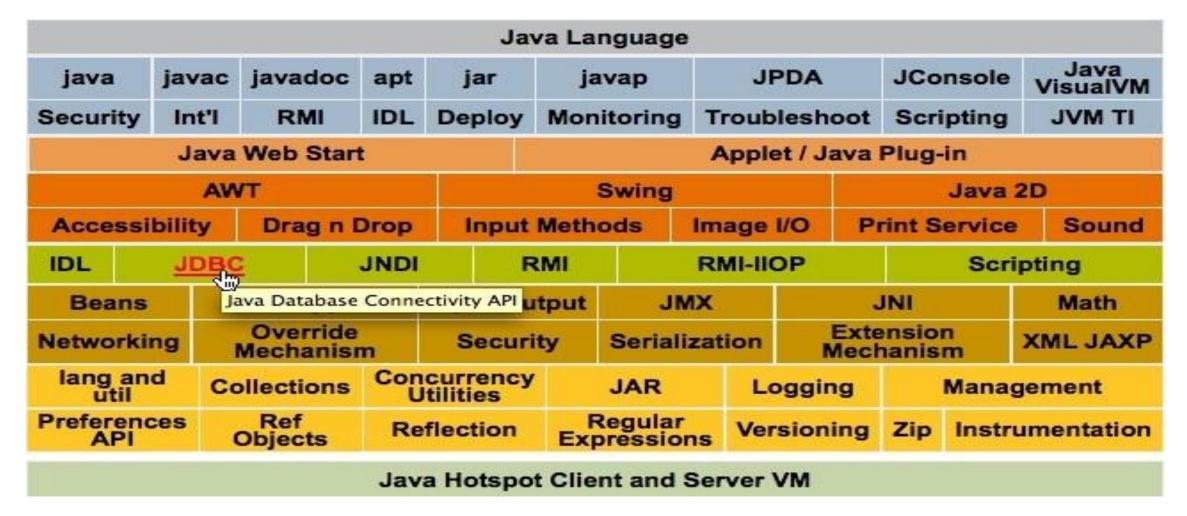


Java ME 8: (JSRs 360 & 361) – April 2014



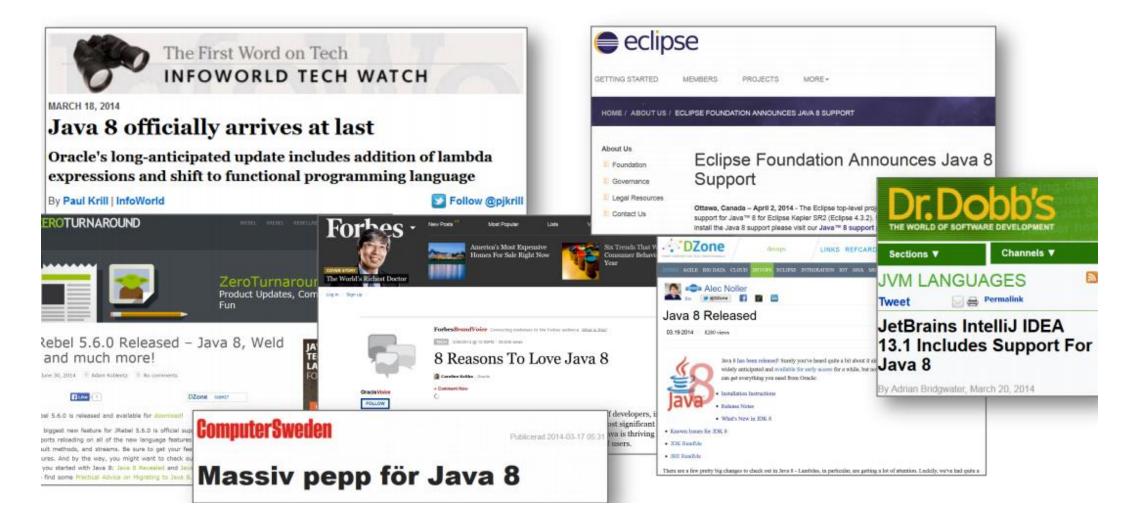


Java SE 8: JSR 337 - March 2014





Java 8 Adoption





JCP.next: Changing the Constitution

of the United States, in Order to form a more perfect Union, establish Justice, insure domestic Tranquility, provide for the common Defence, promote the general Welfare, and secure the Blessings of Liberty to ourselves and our Posterity, do ordain and establish this CONSTITUTION for the United States of America.

SECTION 1. All legislative Powers herein granted shall be vested in a Congress of the United States, which shall consist of a Senate and House of Representatives.

SECTION 2. The House of Representatives shall be composed of Members chosen every second Year by the People of the several States, and the Electors in each State shall have the Qualifications requisite for Electors of the most numerous Branch of the State Legislature.

No Person shall be a Representative who shall not have attained to the Age of twenty-five Years, and been seven Years a Citizen of the United States, and who shall not, when elected, be an Inhabitant of that State in which he shall be chosen.

[Representatives and direct Taxes shall be apportioned among the several States which may be included within this Union, according to their respective Numbers, which shall be determined by adding to the whole Number of free Persons, including those bound to Service for a Term of Years, and excluding Indians not taxed, three fifths of all other Persons.] The actual Enumeration shall be made within three Years after the first Meeting of the Congress of the United States, and within every subsequent Term of ten Years, in such Manner as they shall by Law direct. The Number of Representatives shall not exceed one for every thirty Thousand, but each State shall have at Least one Representative; and until such enumeration shall be made, the State of New Hampshire shall be entitled to chuse three, Massachusetts eight, Rhode-Island and Providence Plantations one, Connecticut five, New-York six, New Jersey four, Pennsylvania eight, Delaware one, Maryland six, Virginia ten, North Carolina five, South Carolina five, and Georgia three.

When vacancies happen in the Representation from any State, the Executive Authority thereof shall issue Writs of Election to fill such Vacancies. The House of Representatives shall chuse their Speaker and other Officers; and shall have the sole Power of Impeachment.

SECTION 3. The Senate of the United States shall be composed of two Senators from each State, chosen by the Legislature thereof, for six Years; and each Senator shall have one Vote.

Immediately after they shall be assembled in Consequence of the first Election, they shall be divided as equally as may be into three Classes. The Seats of the Senators of the first Class shall be vacated at the Expiration of the second Year, of the second Class at the Expiration of the fourth Year, and of the third Class at the Expiration of the sixth Year, so that one-third may be chosen every second Year; and if Vacancies happen by Resignation, or otherwise, during the Recess of the Legislature of any State, the Executive thereof may make temporary Appointments until the next Meeting of the Legislature, which shall then fill such Vacancies.

No Person shall be a Senator who shall not have attained to the Age of thirty Years, and been nine Years a Citizen of the United States, and who shall not, when elected, be an Inhabitant of that State for which he shall be chosen.

The Vice President of the United States shall be President of the Senate, but shall have no Vote, unless they be equally divided.

The Senate shall chuse their other Officers, and also a President pro tempore, in the absence of the Vice President, or when he shall exercise the Office of President of the United States.

The Senate shall have the sole Power to try all Impeachments. When sitting for that Purpose, they shall be on Oath or Affirmation. When the President of the United States is tried, the Chief Justice shall preside: And no Person shall be convicted without the Concurrence of two thirds of the Members present.

Judgment in Cases of Impeachment shall not extend further than to removal from Office, and disqualification to hold and enjoy any Office of honor, Trust or Profit under the United States: but the Party convicted shall nevertheless be liable and subject to Indictment, Trial, Judgment and Punishment, according to Law.



JCP.next (JSR 348)





JCP.next (JSR 355)





JCP.next (JSR 364)





JCP 2.10, Broadening JCP Membership

- Eliminate Barriers to participation.
- Introduce new Membership levels.
- No Membership Fees.
- Electronic Signatures.
- Add Contributors for JSR Expert Groups.
- Add Associate Seats on Executive Committee.



JSR 364 – JCP 2.10

- Goal: encourage more individuals and organizations to join and participate in the JCP while ensuring that we have appropriate IP commitments from all members.
- New Associate membership class for individuals with a much simpler membership agreement.
 - No lawyers and no employer approval required.
 - Associates can be formally recognized as Contributors to a JSR.
- New Partner membership class for Java User Groups that are not legal entities.
- Electronic submission and signing of membership agreements.
- Free membership for corporations.
- The JSR was completed in April 2016 and is now in effect.
- We have already recruited many new members.



Memberships

- Associate Members are individuals who can contribute to JSRs and vote for the Executive Committee.
- Partner Members are Java User Groups and other non-profit organizations that can serve on and vote for the Executive Committee.
- Full Members can serve on Expert Groups, lead JSRs, serve on and vote for the Executive Committee



JCP 2.10 –I individuals

- If you are an individual developer and/or a member of a Java User group you can now join as an *Associate* member.
 - No lawyers and no employer approval required.
 - You can be formally recognized as a Contributor to a JSR.
 - Associate members can vote for two dedicated Associate seats on the Executive Committee.
- You can still join as a full member, but:
 - If you are employed, your employer must sign an Employer Contribution Agreement.
 - A better approach is for your employer to join the JCP as an organization then all employees can participate as representatives of the employer.
 - Otherwise you must sign the JSPA in your own right.
 - Remember this is a complicated legal document.



JCP 2.10 – Java User Groups (JUGs)

- Before JSR 364, JUGs used to sign the JSPA.
- For those (most of them) that are not legal entities this made no sense (a non-organization cannot legally make IP commitments).
- Instead, JUGs can now join as Partner members.
- The Partner Membership Agreement is much simpler than the JSPA, but does not make any IP commitments.
- Partner Members can become Supporters of JSRs and participate in Adoption program activities.
- JUG members who wish to contribute must therefore join in their own right as as Associate or Full members.



JCP 2.10 – Organizations

- Corporations and legal-entity organizations can join as Full members.
- Membership is now free all fees are permanently waived.
- All employees of member organizations can participate in the JCP's activities and JSR Expert Groups as representatives of their employer.



JCP 2.10 – online membership processing

- JCP membership agreements can now be submitted online and are signed through an electronic signature process.
 - No need to print, physically sign, scan, and email the agreements.
- Membership agreements are processed almost instantly ©.

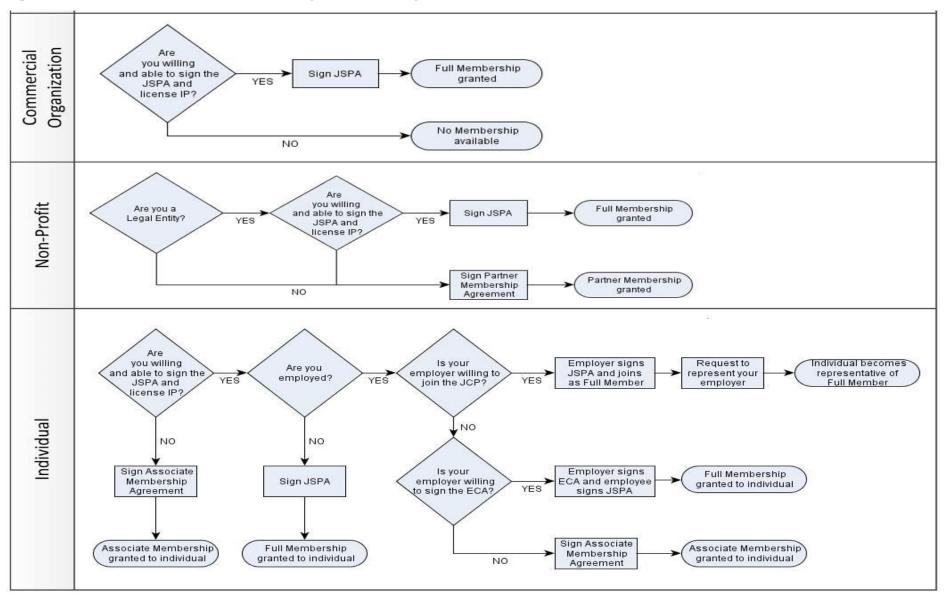
Participation

Participation in the JCP by Key Events

	Observer	Registered User	Associate Member	Partner Member	Full Member
Review JSRs	-	_		_	
Review specification drafts	_	-		-	1 📮
View Expert Group materials (JCP 2.8 and above JSRs)	-	•		-	
View Expert Group and Contributor nominations	-	-		-	100
Be listed as a Supporter for a JSR Proposal	-	-	= -	-	100
Create a JSR Watch List		_		_	
Nominate Contributors		_		_	
Nominate for Expert Group		-		_	
Propose new JSRs				_	
Attend JCP Member events				_	
Serve as a Contributor to a JSR					
Vote for an Associated Seat in the Executive Committee elections					
Vote for a Ratified Seat in the Executive Committee elections					-
Vote for an Elected Seat in the Executive Committee elections				-	
Serve on the Executive Committee				_	
Review Community Drafts (JCP 2.1)					
Serve on Expert Groups					
Lead JSRs					



What is the right membership for you?





Membership Privileges



Privileges

JOIN		Membership Role				
	NOW Pr	Associate Member	Full Member	Partner Member		
	Z V	For Individuals (Corporations and Non-Profits are ineligible) that cannot sign the JSPA, and who cannot be a representative of a Full Member	Corporations, Legal Entity Non- Profits and Individuals Employees may become representatives of Full Member	Non-Profits that are not Legal Entities (Individuals associated with these Entities may also become Associate Members in their own right)		
	Serve on EC	×		☑		
	Vote for Elected Seat	×	✓	☑		
	Vote for Ratified Seat	×	V	☑		
	Vote for Associate Seat	☑	X	×		
	Be a Member of an Expert Group	×	✓	⊠(1)		
	Be a Contributor to an Expert Group		✓	×		
	Be a Specification Lead	X	✓	×		

Partner members who serve on the EC can join the expert groups for process change JSRs (e.g. JCP.next)



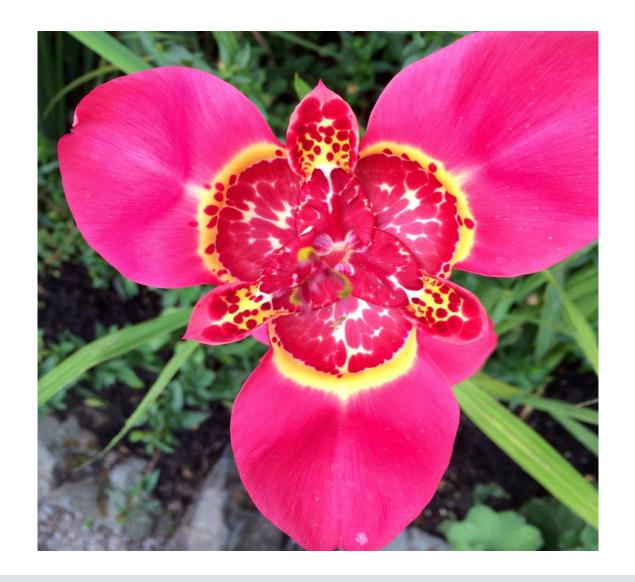
Membership Drive

- Join by 14 October to participate in the 2016 JCP Elections:
 - Ballot open 1 − 14 November 2016.
 - Membership Overview:
 - https://jcp.org/en/participation/overview
 - Instructions for Joining:
 - https://jcp.org/en/participation/membership





The JCP is More Open Than Before





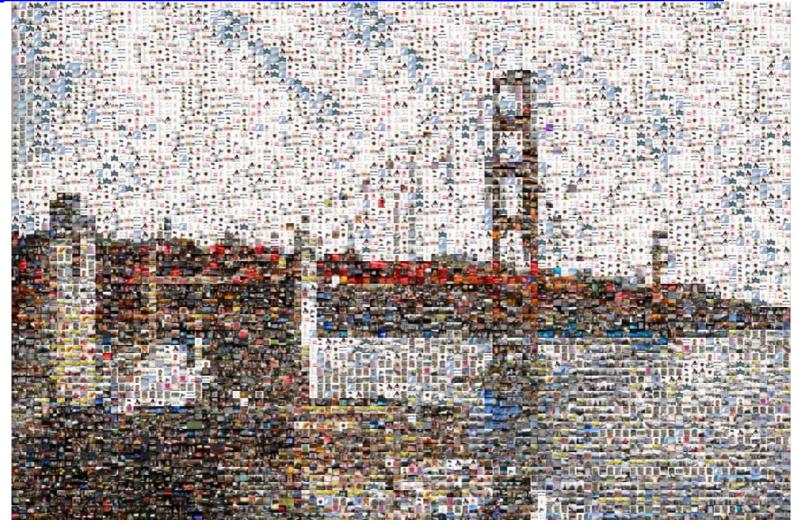
How will you Participate?

- ·As an Individual OK.
- ⋅As part of a team better.
- Work through your JUG or employer.
- -Help each other
- -Teach other.
- -Work with each other.





Working Together – JavaOne 2016 in September https://www.youtube.com/watch?v=J5 MH5jCYh0





Adopt-a-JSR



- •A JUG-lead initiative to improve Java standards.
- •Global groups of JUG members work on JSRs.
 - Receive attention from local industry.
 - Become more professional helps focus your group efforts.
 - Attract more developers to your community



JUGs around the World





Chennai JUG

JSR 338, Java Persistence 2.1

JSR 344, JSF 2.2

JSR 352, Batch

JSR 353, JSON

JSR 356, WebSocket

Developed sample 'Urban Traveler' application.







London Java Community

JSR 310, Date and Time API

JSR 335, Lambda Expressions

Myriad hack days, talks and events organized!







BeJUG (Belgium)

JSR 356, Java API for

WebSocket

Hack day (s).

Developed Tic-Tac-Toe game Included in Java EE 7 SDK.







SouJava (Brazil)

JSR 310, Date and Time API JSR 339, JAX-RS 2.0

344, JSF 2.2

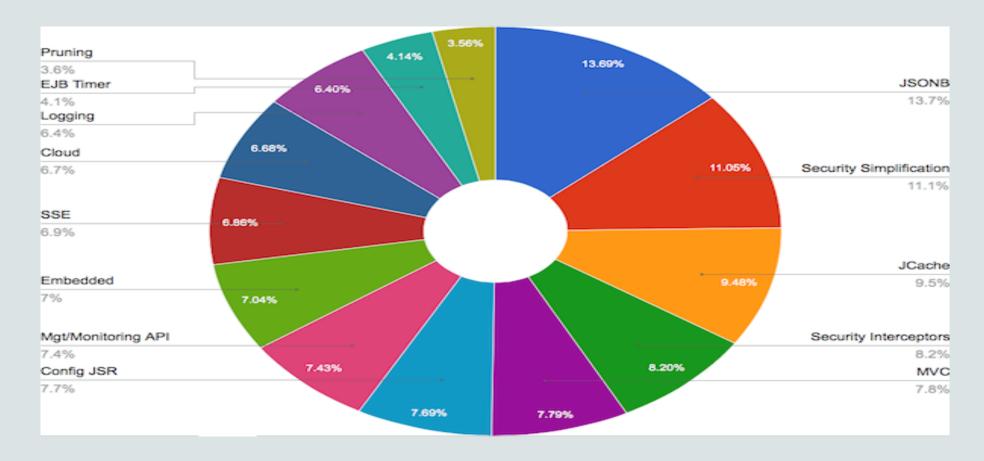
Many talks, books, articles, classes, code dojos (hack days), translations







Java EE 8 Community Survey

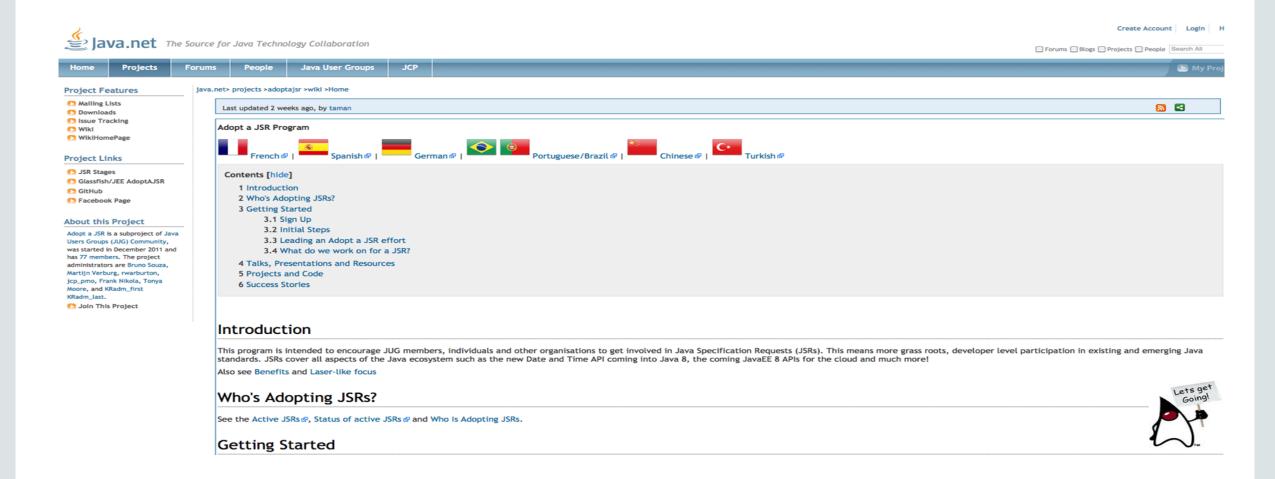


Web standards/HTML5 alignment, Cloud, CDI alignment, Enterprise, Java SE 8





ADOPTAJSR.ORG wiki – Get Started & join list





1) Pick JSR - New JSRs

https://jcp.org/en/jsr/stage?listBy=active

Recently submitted:

Java EE 8 (JSR 366)

CDI 2 (JSR 365)

JSON-B (JSR 367)

JMS 2.1 (JSR 368)

Servlet 4 (JSR 369)

JAX-RS 2.1 (JSR 370)

MVC (JSR 371)

JSF 2.3 (JSR 372)

Security (JSR 375)

Java EE Management (JSR 373)

JSON-P 1.1 (JSR 374)

Units of Measurement (JSR 363)

Java Module System (JSR 376)

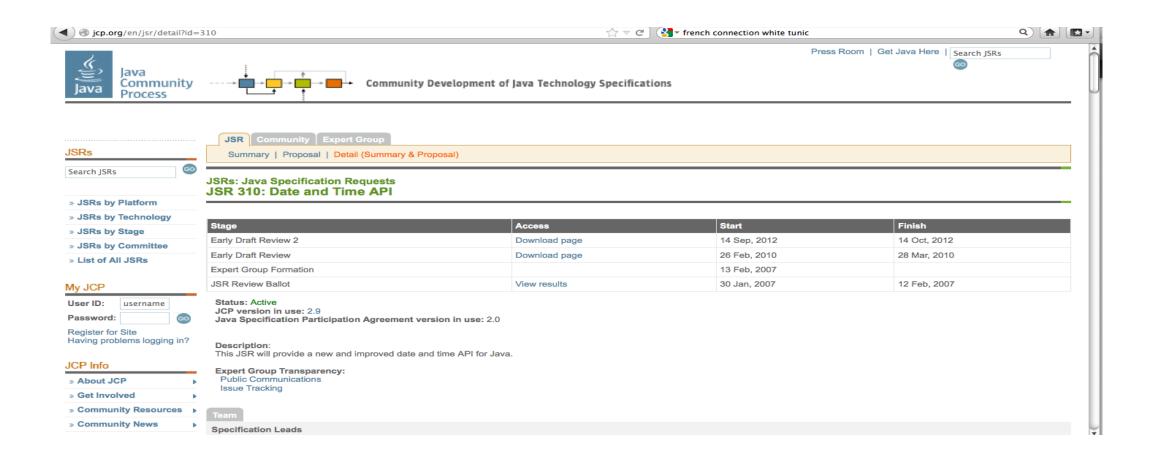
Desktop Application API (JSR 377)

Portlet 3.0 Bridge for JSF 2.2(JSR 378)

Java SE 9 Release Contents (JSR 379)



JSR example page

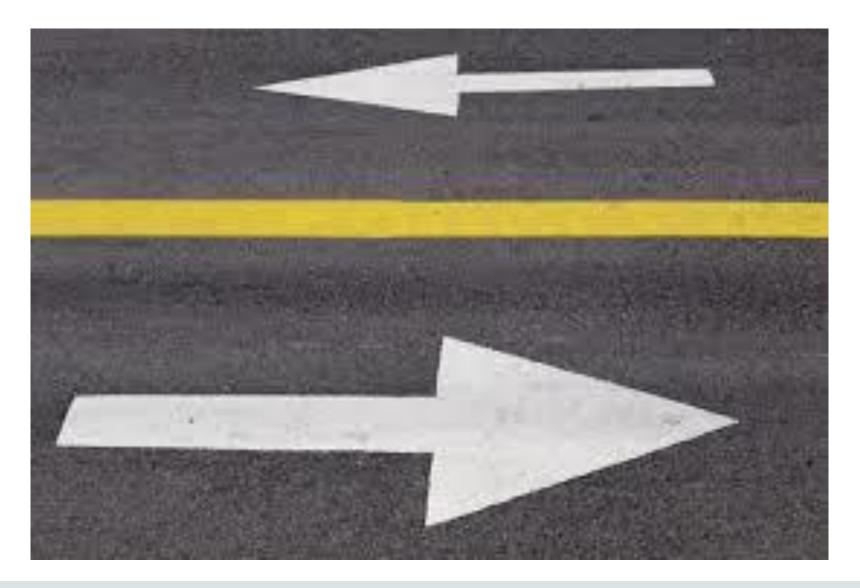


List of Active JSRs (posting in last 12 months):

Process

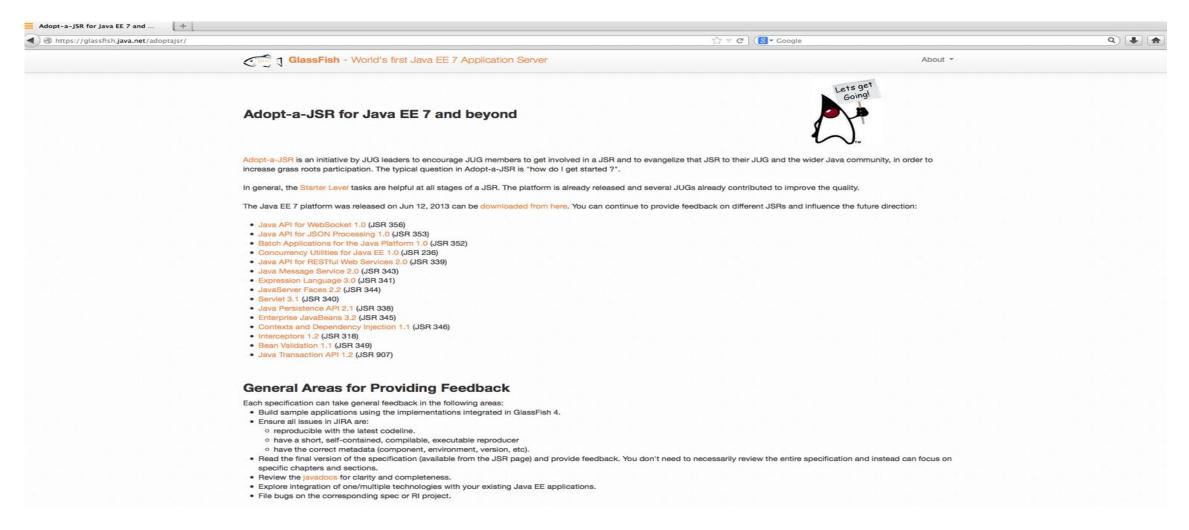
http://jcp.org/en/jsr/all?status=Active&activeMonths=12.

2) Communication: Two Way Street



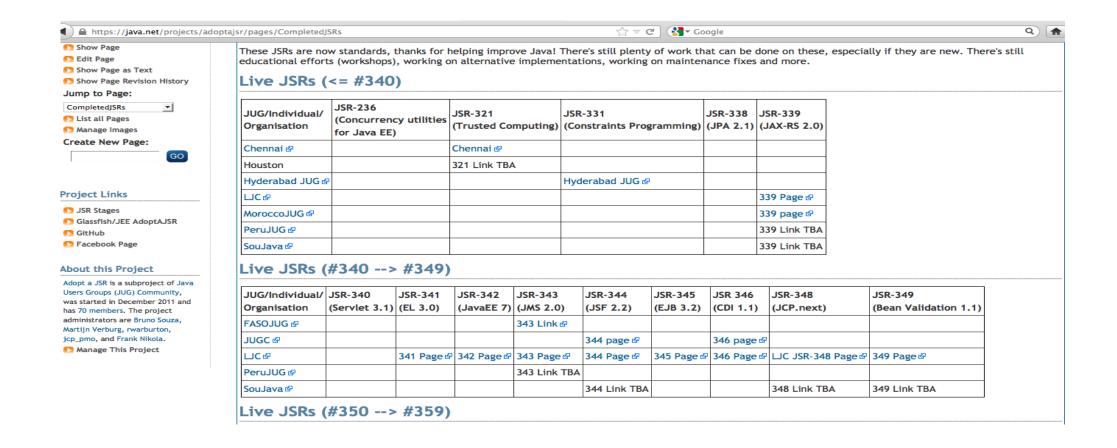


3) Decide on Steps: Java EE Adopt-a-JSR



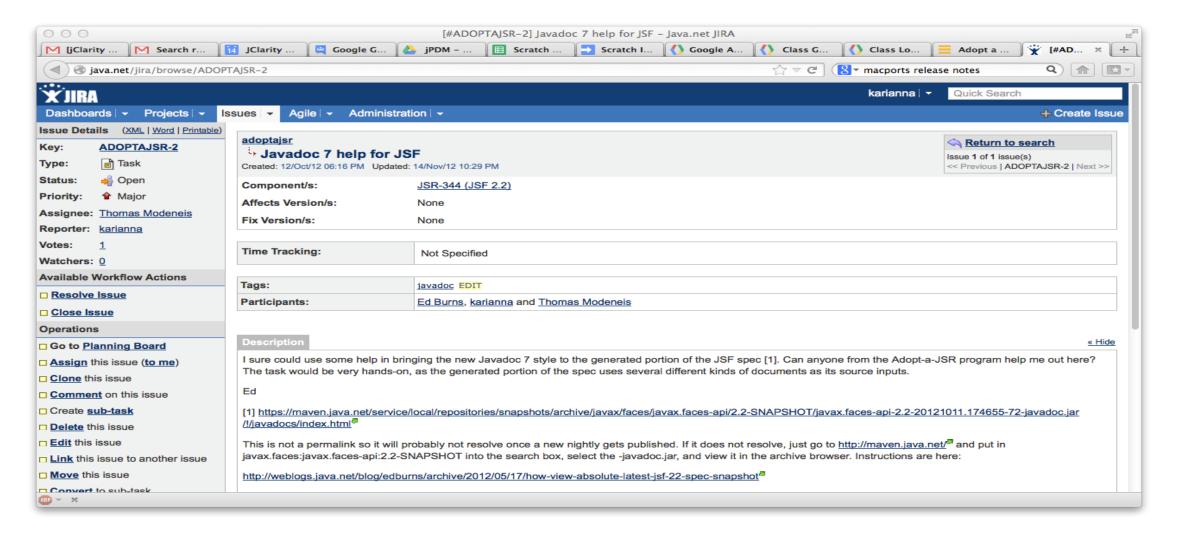


4) Enter activity in the matrix - Collaborate





5) Follow Public Discussions & Comment - Jira example



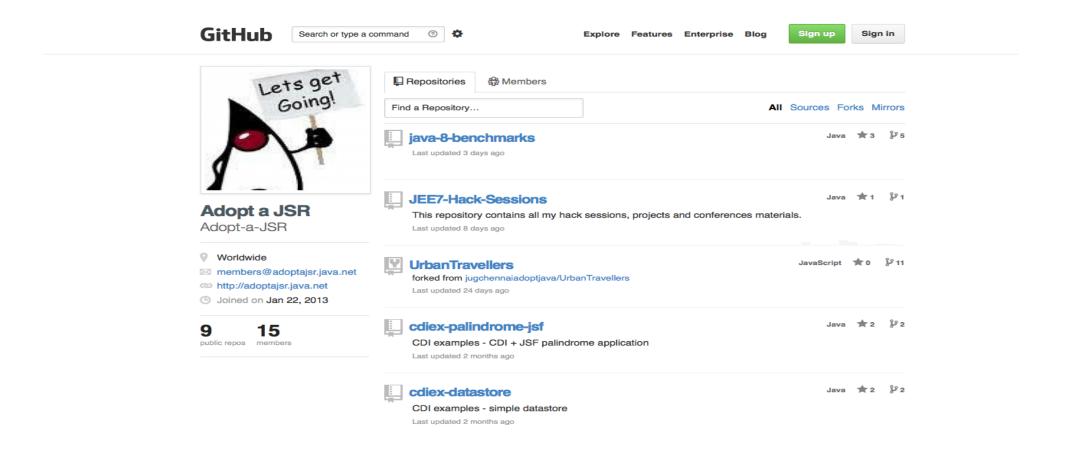


5) How to Write a Bug - SSCCE

- Short, Self Contained, Correct (Compilable), Example
- Short (Small) Minimise bandwidth for the example, do not bore the audience.
- Self Contained Ensure everything is included, ready to go.
- Correct Copy, paste, (compile,) see is the aim.
- Example Displays the problem we are trying to solve.



6) Share - Add & Use Resources on GitHub





Participate in OpenJDK

- Adoption Group & Quality Outreach
 - Join mail list prior to sending feedback:
 http://mail.openjdk.java.net/mailman/listinfo/adoption-discuss
 - https://wiki.openjdk.java.net/display/quality/Quality+Outreach





JDK 9

Another big step forward

- 72 JEPs targeted for JDK 9
 - JEP == Java Enhancement Proposal
- Big one JEP 261– Module System
 - http://openjdk.java.net/jeps/261
 - Related JEPs for the Module System
 - JEP 200 The Modular JDK
 - JEP 201 Modular Source Code
 - JEP 220 Modular Run-Time Images
 - JEP 260 Encapsulate Most Internal APIs
 - JEP 162 Prepare for Modularization



JDK9

Another big step forward

- Jigsaw available in current JDK 9 EA (early access)
 - https://jdk9.java.net/download/
 - Build 111 or later has Jigsaw in it
 - Current available downloadable build is Build 127



JDK 9 Outreach

https://wiki.openjdk.java.net/display/Adoption/JDK+9+Outreach#JDK9Outreach-Introduction

- → C https://wiki.openjdk.java.net/display/Adoption/JDK+9+Outreach#JDK9Outreach-Introduction

OpenJDKwiki

About Adoption

Adoption

✓ Main

Developers Guide

JDK 9 Outreach

New Contributor

> Quarterly Reports

Build

DUK 9 Outreach

Attachments: 0 • Added by Dalibor Topic on Jul 06, 2015 (view change) • Labels None

JDK 9 Outreach

JDK 9 Outreach

Attachments: 0 • Added by Dalibor Topic on Jul 06, 2015 (view change) • Labels None

JDK 9 Outreach

> Quarterly Reports
Build
Code Tools
Coin
Compiler
Device I/O
Graal
HotSpot
JDK 7u
JDK 8
Kulla
Memory Model Update
Multi-Language VM
Nashorn
OpenJFX
Port: AArch64
Port: BSD
Port: MacOSX

Port: PowerPC/AIX

Type Annotations

Quality

Sumatra

JDK 9 Outreach Introduction

- Introduction
- Caveat Lector
 - JDK 9 Features
- · The Little Things
 - JDK 9 Early Access Builds
 - Look for unrecognized VM options
 - · Run jdeps on your code
- Testing Your Code
- . JDK 9 changes that may affect your code
 - Added
 - OCSP Stapling for TLS
 - Parser API for Nashorn
 - Validate JVM Command-Line Flag Arguments
 - Changed
 - Modular Run-Time Images
 - New Version-String Scheme
 - Unified JVM Logging
 - Use CLDR Locale Data by Default
 - Remove
 - Remove GC Combinations Deprecated in JDK 8
 - Remove Launch-Time JRE Version Selection
 - . Remove the JVM TI hprof Agent
 - · Remove the jhat Tool
 - Removed API references to java.awt.peer and java.awt.dnd.peer packages
 - Removed Packer/Unpacker addPropertyChangeListener and removePropertyChangeListener methods
 - Removed LogManager addPropertyChangeListener and removePropertyChangeListener methods
 - Removed com.sun.security.auth.callback.DialogCallbackHandler
 - Build
 - Milling Project Coin
 - Simplified Doclet API
 - Annotations Pipeline 2.0
 - HTML5 Javadoc
 - · Removed support for 1.5 and earlier source and target options
- · Feedback on new JDK 9 features
 - Make G1 the Default Garbage Collector
 - · jshell: The Java Shell (Read-Eval-Print Loop)
- · Other potential changes to consider



•Test Java 9 – changes that may affect your code

- JDK 9 changes that may affect your code -Added
 - OCSP Stapling for TLS
 - Multi-Release JAR Files
 - Parser API for Nashorn
 - Prepare JavaFX UI Controls & CSS APIs for Modularization
 - Validate JVM Command-Line Flag Arguments
 - XML Catalogs
 - Platform-Specific Desktop Features
 - Ilback.DialogCallbackHandler



•Test Java 9 – changes that may affect your code

Changed

- Arrays.asList(x).toArray() returns Object[]
- Create PKCS12 Keystores by Default
- HarfBuzz Font-Layout Engine
- Make G1 the Default Garbage Collector
- Marlin Graphics Renderer
- Modular Run-Time Images
- New Version-String Scheme
- Unified JVM Logging
- Use CLDR Locale Data by Default
- UTF-8 Property Files



•Test Java 9 – changes that may affect your code

Removed

- Remove GC Combinations Deprecated in JDK 8
- Remove Launch-Time JRE Version Selection
- Remove the JVM TI hprof Agent
- Remove the jhat Tool
- Removed API references to java.awt.peer and java.awt.dnd.peer packages
- Removed Packer/Unpacker addPropertyChangeListener and removePropertyChangeListener methods
- Removed LogManager addPropertyChangeListener and removePropertyChangeListener methods
- Removed com.sun.security.auth.ca



7) Participate in Hack Days – Have Fun!





JavaOne 2016 Plans!!

- Friday: Java Community BBQ
- Saturday: JavaOne4Kids
- Sunday: User Group Sunday (JCP EC Public Meeting)
- Monday: JCP Party (& Java Community Band ©)
- Wednesday: JCP Meet & Greet for Members, Spec Leads, Adoption
- Hackergarten in JavaHub
- Sessions tbd



We need you!

- Follow the JCP online: http://JCP.org
- –Join the JCP: https://jcp.org/en/participation/membership
- -Twitter @jcp_org #JCP
- -blogs.oracle.com/jcp
- -Facebook: Java Community Process
- ·Adopt-a-JSR online: adoptajsr.org. #adoptajsr
- -members@adoptajsr.java.net the global mailing list
- -IRC: #adoptajsr channel on irc.freenode.net
- -GitHub: https://github.com/Adopt-a-JSR



If you want to go far...



